

V. REMARKS

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as anticipated by Xue et al. (WO 00/73227). The rejection is respectfully traversed.

Xue is directed to a low temperature burnout screen printing glass frit paste. The glass frit paste includes about 0.3-12.0 wt.% nitrocellulose, about 0.5-2.0 wt.% of a high vapor pressure solvent of the nitrocellulose, about 14.0-25.0 wt.% alpha-terpineol and the remainder being glass frit.

In brief, Xue does not disclose that each boiling point of the plurality of the kinds of solvents differs by 30°C or more and that the paste contains low boiling point solvents having a boiling point from 100°C to 180°C and high boiling point solvents having a boiling point from 190°C to 450°C.

The Xue citation discloses on page 3, lines 21 to 23, that "First nitrocellulose is dissolved in a high vapor pressure solvent such as amyl-acetate or ethylene glycol monoethyl ether to make a solution. It is clear from this description that Xue does not disclose the use of a mixture of solvents. The boiling point of amyl-acetate or ethylene glycol monoethyl ether is 121°C and 136°C respectively. Therefore, Xue neither discloses nor suggests the use of low boiling point solvents having a boiling point from 190°C to 450°C. In all examples, amyl acetate or ethylene glycol monoethyl ether is used. That is, it is also clear that the Xue citation neither discloses nor suggests the use of a solvent mixture.

Claim 1 is directed to a paste that includes 50-95 % by weight of glass powder or glass-ceramic mixed powder, 0.1-15 % by weight of a resin, and 3-60 % by weight of a plurality of kinds of solvents. Claim 1 recites that each boiling point of the plurality of kinds of solvents differs by 30°C or more and the plurality of kinds of solvents contain one or more low boiling point solvents which are low boiling point solvents having a boiling point from 100°C to 180°C, and one or more high boiling point solvents which are high boiling point solvents having a boiling point from 190°C to 450°C.

It is respectfully submitted that the rejection is improper because the applied art fails to teach each element of claim 1. Specifically, it is respectfully submitted that the applied art fails to teach a paste that includes 50-95 % by weight of glass powder or glass-ceramic mixed powder, 0.1-15 % by weight of a resin, and 3-60 %

by weight of a plurality of kinds of solvents. Furthermore, it is respectfully submitted that the applied art fails to teach that each boiling point of the plurality of kinds of solvents differs by 30°C or more and the plurality of kinds of solvents contain one or more low boiling point solvents which are low boiling point solvents having a boiling point from 100°C to 180°C, and one or more high boiling point solvents which are high boiling point solvents having a boiling point from 190°C to 450°C. As a result, it is respectfully submitted that claim 1 is allowable over the applied art.

Claim 2 depends from claim 1 and includes all of the features of claim 1. Thus, it is respectfully submitted that the dependent claim is allowable at least for the reason claim 1 is allowable as well as for the features it recites.

Withdrawal of the rejection is respectfully requested.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as anticipated by Wang (EP 722179). The rejection is respectfully traversed.

Wang discloses a coatable insulator composition for use in the formation of a plasma display apparatus barrier-rib. The coatable insulator composition includes an inorganic fine powder composed of 30 to 60 vol% non-crystalline glass that has a softening point that is at least 50° C lower than firing temperature and 20 to 70 vol% refractory oxide and 0-50 percent vol% refractory pigment, a binder composed of 40 to 60 percent vol% polymer substance and 40 to 60 vol% plasticizer and a volatile organic solvent. The inorganic fine powder is dispersed in a solution obtained by dissolving the binder and the volatile organic solvent.

In brief, Wang citation does not disclose that each boiling point of the plurality of kinds of solvents differs by 30°C or more, and that the paste contains low boiling point solvents having a boiling point from 100°C to 180°C and high boiling point solvents having a boiling point from 190°C to 450°C.

The Wang citation discloses on page 7, lines 21-24, that "This solvent must also have a boiling point that is lower than any of the other additives contained in the composition. Examples of such solvents include acetone (56°C), xylene (about 140°C), methanol (65°C), ethanol (78°C), isopropanol (83°C), methyl ethyl ketone (80°C), 1,1,1-trichloroethane (74°C), tetrachloroethylene (121°C), amyl acetate (121°C), 2,2, 4-triethylpentanediol- 1,3-monoisobutyrate (?°C), toluene (111°C), methylene chloride (40°C), and fluorocarbons (40°C)." The numerical values in the parentheses are the boiling points of these solvents.

Moreover, the boiling point of 2.2.4-triethylpentanediol-1,3-monoisobutyrate is unclear, because a compound having such a structure does not seem to exist. It is clear from these descriptions that the Wang citation does not use the high boiling point solvents having a boiling point from 190°C to 450°C which are contained in the paste of claim 1.

In addition, as shown in Table 1 on page 9, an acetone/ethyl acetate mixed solvent is used in the Examples 1 to 3. The boiling point of acetone and ethyl acetate is 56°C and 77°C respectively. That is, the Wang citation does not use the high boiling point solvents having a boiling point from 190°C to 450°C even in the Examples. In summary, the Wang citation neither discloses nor suggests the use of high boiling point solvents having a boiling point from 190°C to 450°C.

It is respectfully submitted that the rejection is improper because the applied art fails to teach each element of claim 1. Specifically, it is respectfully submitted that the applied art fails to teach a paste that includes 50-95 % by weight of glass powder or glass-ceramic mixed powder, 0.1-15 % by weight of a resin, and 3-60 % by weight of a plurality of kinds of solvents. Furthermore, it is respectfully submitted that the applied art fails to teach that each boiling point of the plurality of kinds of solvents differs by 30°C or more and the plurality of kinds of solvents contain one or more low boiling point solvents which are low boiling point solvents having a boiling point from 100°C to 180°C and one or more high boiling point solvents which are high boiling point solvents having a boiling point from 190°C to 450°C. As a result, it is respectfully submitted that claim 1 is allowable over the applied art.

Claims 2-6 depend from claim 1 and include all of the features of claim 1. Thus, it is respectfully submitted that the dependent claims are allowable at least for the reason claim 1 is allowable as well as for the features they recite. In particular, claims 3 and 4 recite that one or more low boiling point solvents are selected from the group consisting of ether solvent, ester solvent, and hydrocarbon solvents; and the one or more high boiling point solvents are ether solvents. Claims 5 and 6 recite that the weight ratio of the one or more high boiling point solvents to the one or more low boiling point solvents in the form of low boiling point solvent: high boiling point solvent is 50-5:50-95. For these additional reasons, it is respectfully submitted that claims 3-6 are allowable over the applied art.

Withdrawal of the rejection is respectfully requested.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as unpatentable over Wang. The rejection is respectfully traversed.

It is respectfully submitted that none of the applied art, alone or in combination, teaches or suggests the features of claim 1. Specifically, it is respectfully submitted that none of the applied art, alone or in combination, teaches or suggests a paste that includes 50-95 % by weight of glass powder or glass-ceramic mixed powder, 0.1-15 % by weight of a resin, and 3-60 % by weight of a plurality of kinds of solvents. Furthermore, it is respectfully submitted that the applied art fails to teach that each boiling point of the plurality of kinds of solvents differs by 30°C or more and the plurality of kinds of solvents contain one or more low boiling point solvents which are low boiling point solvents having a boiling point from 100°C to 180°C, and one or more high boiling point solvents which are high boiling point solvents having a boiling point from 190°C to 450°C. Thus, it is respectfully submitted that one of ordinary skill in the art would not be motivated to modify the features of the applied art because the applied art is devoid of such features. As a result, it is respectfully submitted that claim 1 is allowable over the applied art.

Claims 2-6 depend from claim 1 and include all of the features of claim 1. Thus, it is respectfully submitted that the dependent claims are allowable at least for the reason claim 1 is allowable as well as for the features they recite as mentioned above.

Withdrawal of the rejection is respectfully requested.

In view of the foregoing, reconsideration of the application and allowance of the pending claims are respectfully requested. Should the Examiner believe anything further is desirable in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' representative at the telephone number listed below.

Should additional fees be necessary in connection with the filing of this paper or if a Petition for Extension of Time is required for timely acceptance of the same, the Commissioner is hereby authorized to charge Deposit Account No. 18-0013 for any such fees and Applicant(s) hereby petition for such extension of time.

Respectfully submitted,

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